



## Getting Started: 10 Questions for Cities and Towns Considering Residential Curbside Composting

In recent years, an increasing number of municipalities have begun to explore the economic and environmental benefits of citywide residential composting programs. These programs can greatly increase the amount of waste diverted from landfills and potentially lead to reduced waste disposal fees as well. Cities and towns considering the implementation of such programs will be faced with a number of fundamental questions. The questions provided below are intended to help municipalities become aware of the varied decisions and considerations that they will have to contend with when evaluating the feasibility of new composting programs.

### 1. Who will collect food waste?

A city's relationship with local waste haulers can be a key factor in determining the success of future programs. In over 70% of cities with effective residential composting programs, a single private contract hauler collects trash, recycling, and organic waste. Just 10% of cities operate a municipally run collection program, while only 6% of cities allow multiple haulers operating under open competition to provide services.<sup>i</sup>

The presence of exclusive contracts allows haulers to maximize route density, which results in more efficient and profitable programs. Public officials in San Francisco point to the city's long-term, mutually beneficial contract with their hauler when discussing the success of their program. Long-term commitment from the city has allowed the hauler to make significant investment in future capacity and has helped the program to become one of the more successful programs in the country.

In other cities a small number of haulers divide collection responsibility geographically, with little to no overlap. In Seattle, two private haulers are each responsible for separate portions of the city. This allows for dense efficient collection of waste while maintaining a level of competition among waste haulers.

### 2. What will be collected?

Deciding what type of organic material will be accepted is another important decision for any city considering a new composting program. The majority of current municipal composting programs depended heavily on yard waste in their early stages. Most found that adding food waste to an existing yard waste program is the quickest, easiest, and least expensive way to implement a new program.

Over 90% of programs currently accept meat and dairy. In fact, pilot programs conducted in San Francisco in the late 90's found that those pilots that accepted meat and dairy had noticeably higher diversion and participation rates than those pilots in which only vegetable matter was accepted.<sup>ii</sup>

Paper products are another important material for cities to consider. In some communities paper was reported to make up as much as 50% of the total material collected by weight. Food soiled paper has been recognized as a particularly effective means of improving participation rates, with studies noting that it is relatively easy to get residents to include items such as pizza boxes in the organics stream. This helps to get the public started in the program and increases participation rates.

Of course processing capability in the local region will likely have the greatest influence on what a program is able to accept. Compostable serving-ware is a good example of this constraint. In areas served by processors capable of handling large volumes of compostables, serving-ware is typically accepted. This is less common in

communities with small volume processing facilities.

### 3. How will it be collected?

There are a number of factors that need to be considered when answering the “how” of food waste collection. Frequency of collection, variety of bins offered to residents, and acceptance of compostable trash bag are a few of the issues to consider.

#### Frequency

Collection frequency tends to vary with region and season. The majority of programs offer weekly collection. This helps to reduce sanitation concerns and complaints of smell. In winter or in regions with colder climates collection may be reduced to every other week. This can reduce the costs associated with collection.

Recently cities with more mature programs have begun implementing composting collection every week, while at the same time reducing trash collection to every other week. This is intended to create an additional incentive for households to increase diversion rates.

#### Bin Types

The vast majority of operating programs currently use wheeled lidded carts ranging in size from 32 to 96 gallons. Use of different sized carts allows programs to charge varying rates depending on the volume produced by households.

#### Bags

Most programs currently allow compostable garbage bags, but do not actively encourage their use. Compostable bags are often expensive for the consumer and frequently pose a challenge for processors who find that the bags do not break down easily during the composting process. Many programs instead encourage the use of paper to line composting bins.

#### Kitchen pails

The use of kitchen pails is a source of debate among cities with successful food waste collection programs. Many cities provide citizens with small 1-2 gallon containers that are intended for use as temporary kitchen storage devices. Some

programs advocate their use, while others claim the pails go unused and are an unnecessary expense. Most mature programs are trending away from providing residents with pails, preferring instead to educate households on the use of alternatives already present within the home.

### 4. Where will it be taken after collection?

Processing capacity has proven to be a significant constraint for various locations throughout the country. The City of Cambridge cites lack of processing capacity in eastern

Massachusetts as the most significant factor preventing the expansion of their current small-scale drop-off only program to a full-scale curbside collection program.

By contrast, cities with successful full-scale programs such as Seattle and San Francisco are located near large commercial composting facilities capable of processing as much as 500 tons per day. In comparison, most facilities in eastern Massachusetts are small farms permitted to process only about 15 tons per day.

Proximity to processing facilities may also pose a challenge for certain cities. In 2010 Denver cancelled what had been a successful residential curbside composting pilot program due to high cost of operation. The high cost was attributed primarily to the long haul distance required to reach the processing facility.

Please refer to the accompanying paper, *Anaerobic Digestion in Managing Food Waste* for additional information on processing capabilities.

### 5. How will communities fund collection and how will residents pay for it?

Communities currently fund collection of household waste through three primary methods:

- Revenue collected through property taxes

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- Fixed fees from households
- Pay-as-you-throw (PAYT).

PAYT is currently in place in 26% of communities nationwide. Among communities with successful composting programs the rate is significantly higher, with 80% using a PAYT structure.<sup>iii</sup>

This disproportionately high number of composting cities using PAYT is unsurprising given that PAYT, when combined with a rate structure in which citizens pay less for the disposal of organic waste than trash, can provide a significant economic incentive for citizens to participate in the program.

Boulder, Colorado provides an example of the economic incentives provided by PAYT programs. In Boulder residents are offered a choice between a 32, 64, or 96-gallon trash container, with rates increasing with size. During the city's initial pilot in 2006 residents were given an additional 32-gallon container to be used for the collection of compostables. This resulted in a 12% drop in the number of households subscribing to a 64 or 96-gallon service.<sup>iv</sup>

For cities where true PAYT programs are not feasible, an alternative is to require that haulers embed a minimal level of composting service within trash rates so that all households pay for the service. This typically results in a moderate increase in rates for customers. When Boulder implemented this type of mandate, residential waste disposal bills increased by an average of \$2.50 per month.

## 6. Will food waste collection save households money?

Savings per household will vary significantly from region to region. Local collection rates and differences in quantity of waste produced per household account for much of the variability. In many cases households will actually be required to pay slightly more for food waste collection. This increase is highly dependent upon the local tipping fees at landfills and organic waste processing facilities.

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In cases in which residents are asked to pay more to participate in composting programs it is helpful to emphasize the potential for minimizing these increases by increasing household diversion. It is also helpful to motivate citizens by emphasizing the positive environmental impact of composting.

The accompanying spreadsheet tools can give households and municipalities a good estimation of the potential costs and environmental impacts associated with residential composting.

## 7. What local organizations can help?

Holding a regional organics summit can be an effective means of ensuring various organizations are involved in identifying and overcoming barriers to organic waste diversion. Processors, generators, haulers, decision-makers, and regulators all have a stake in the development of residential composting programs and should be encouraged to work together to effectively solve shared challenges.

In addition, citizens groups such as Sustainable Arlington can help to generate significant public interest in these programs and provide the public support necessary for success. Sustainable Arlington has been instrumental in the current push for a new municipal composting program in Arlington, Massachusetts.

State environmental institutions can also be called upon to provide assistance in the implementation of the municipal composting programs. Both Denver and Cambridge received financial assistance in the form of state grants when beginning their respective composting initiatives. In San Francisco, the city Department of the Environment annually distributes \$600,000 in grants to nonprofit organizations in support of:

- Innovation in reuse
- Market development
- Education
- Various other recycling and composting initiatives



Local colleges and universities have also provided significant assistance in the implementation of organics programs. These institutions often have significant access to grants and other sources of funding necessary to begin pilot programs. Additionally, college and university students can often provide the labor and enthusiasm necessary for the initiation of new programs.

## 8. What educational campaigns can be helpful?

It is impossible to overstate the importance of comprehensive public education campaigns. These campaigns are essential to the success of any new residential composting program. In 2009, after completing a rigorous outreach program, Seattle successfully implemented a major new curbside solid waste collection program, which included the addition of a mandatory residential composting service. The program included a 42% rate increase and affected 530,000 customers. Despite these potential challenges, the city reports that 90% of residents were aware of the new program prior to implementation and 90% feel “very satisfied” with the new program.<sup>v</sup>

The success of this program implementation is due in large part to the multiple forms of media that the city used to reach citizens, including:

- Newsletters
- Newspaper articles
- City websites
- Multiple forms of advertising
- Clear instructions on the new trash receptacles
- Community meetings

In San Francisco, Department of the Environment maintains a team of full-time “zero-waste” specialists. These individuals perform waste audits, provide technical assistance to residents and businesses, and knock on thousands of doors whenever rules change. San Francisco also leverages a strong relationship with the local media in order to generate positive impressions of the city’s programs and increase participation rates.

## 9. What legislation or changes to city code may be necessary to ensure success?

Although participation in residential composting campaigns is voluntary in over 90% of programs, legislation does play a major role in many of the most successful programs. Participation is mandatory for residents of San Francisco and Seattle. In Boulder, independent haulers are required to embed curbside composting into their standard residential trash service. In Massachusetts, the Department of Environmental Protection is working on a plan to ban food scraps from commercial waste streams in 2014.

Local governments can also facilitate the growth of composting programs by streamlining the permitting and siting procedures for processing facilities. They may also spur development by reducing permitting fees, which have the potential to make development economically infeasible. Taking these actions would be a major step in reducing the lack of processing capacity in regions like Eastern Massachusetts.

## 10. What can be learned from the difficulties that other cities have faced?

Cities must be aware of the difficulties they will face during the implementation process. When possible, it is best to take lessons from cities that have already faced similar challenges.

One frequent challenge is resistance from citizens fearful of smell, the “yuck” factor, and vermin. In each of these cases, education is a very effective means of combating such concerns. Freezing, wrapping in paper, and layering with yard waste are all effective methods for dealing with unpleasant food scraps. It is also helpful to remind citizens that, with the exception of households using garbage disposals, no new materials are being added to waste bins. It is simply a matter of moving contents to a separate bin. Pests and animals should be of no greater concern than they were before implementation of the new program.



Wildlife disturbances are another common concern for citizens living in more rural locations. A recent survey of Boulder residents reported that 25% of households have experienced some type of animal disturbance. Again, education can significantly reduce these challenges. The use of proper waste disposal containers with functioning lids must be encouraged. In addition, citizens should be cautioned against leaving waste containers out overnight, as most animals likely to cause disturbances are active primarily at night.

More significant difficulties usually stem from unfavorable costs and lack of processing capacity as discussed above. These issues have been enough to halt pilot programs in Denver and in Burnsville, Minnesota. Despite the setback, local officials in both cities remain optimistic about the potential success of future programs. Citizens in both cities continue to demonstrate significant interest in municipal composting services. The introduction of new processing facilities would significantly improve the economic prospects of composting in both locations.

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<sup>i</sup> Econservation Institute, Best Management Practices, <http://www.foodscrapsrecovery.com/research.html>

<sup>ii</sup> Macy, J. (2000, February) San Francisco Takes Residential Organics Collection Full-Scale. Biocycle

<sup>iii</sup> EPA, 2006 PAYT Programs, <http://www.epa.gov/epawaste/conservation/tools/payt/states/06comm.htm>

<sup>iv</sup> SERA, (2007, September) Boulder Colorado Pilot Recycling Program Report

<sup>v</sup> Seattle Public Utilities, SWANA Excellence Award Nomination: Marketing